1   **WE CLAIM:**

1   1.   A digital video recorder for storing a plaintext video program as an encrypted video

2   program, the digital video recorder comprising:

3   (a) a random access storage (RAS) device for storing the encrypted video program in

4   encrypted segments;

5   (b) a cryptography facility comprising:

6   an encoder for encrypting plaintext segments of the plaintext video program into

7   the encrypted segments stored on the RAS device; and

8   a decoder for randomly and independently decrypting each encrypted segment of

9   the encrypted video program into a plaintext segment during playback.

1   2.   The digital video recorder as recited in claim 1, wherein the cryptography facility further

2   comprises a pseudo-random sequence generator for generating a pseudo-random

3   sequence.

1   3.   The digital video recorder as recited in claim 2, wherein:

2   (a) the pseudo-random sequence generator is initialized with segment seed values

3   corresponding to the plaintext segments of the plaintext video program; and

4   (b) the encoder combines the pseudo-random sequence generated for each segment seed

5   value with the plaintext segments of the plaintext video program to generate the

6   encrypted segments of the encrypted video program stored on the RAS device.

1   4.   The digital video recorder as recited in claim 2, wherein:

2   (a) the pseudo-random sequence generator is initialized with segment seed values

3   corresponding to the encrypted segments of the encrypted video program; and

4   (b) the decoder combines the pseudo-random sequence generated for each segment seed

5   value with the encrypted segments of the encrypted video program to generate the

6   plaintext segments of the plaintext video program during playback.

1   5.   The digital video recorder as recited in claim 2, wherein:

2   (a) the pseudo-random sequence generator comprises a linear feedback shift register

3   (LFSR); and

4   (b) the LFSR is initialized with segment seed values corresponding to the plaintext

5   segments of the plaintext video program during encoding, and with segment seed

6   values corresponding to the encrypted segments of the encrypted video program

7   during decoding.

1   6.   The digital video recorder as recited in claim 5, further comprising a seed value generator

2   for generating the segment seed values from an initial value.

1   7.   The digital video recorder as recited in claim 1, wherein:

2   (a) the RAS device comprises a hard disk drive (HDD) comprising a disk;

3   (b) the disk comprises a plurality of data tracks;

4   (c) each track comprises a plurality of data sectors; and

5   (d) each data sector stores an encrypted segment of the encrypted video program.
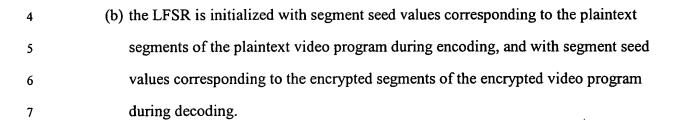
1   8.   A method for processing a video program in a digital video recorder comprising a random

2   access storage (RAS) device, the method comprising the steps of:

3   (a) encrypting plaintext segments of a plaintext video program into encrypted segments;

4   (b) storing the encrypted segments on the RAS device;

5   (c) randomly reading the encrypted segments from the RAS device; and

6   (d) independently decrypting each encrypted segment into a plaintext segment.

1   9.   The method for processing a video program as recited in claim 8, further comprising the

2   step of generating a pseudo-random sequence using a pseudo-random sequence generator.

1   10.   The method for processing a video program as recited in claim 9, further comprising the

2   steps of:

3   (a) initializing the pseudo-random sequence generator with segment seed values

4   corresponding to the plaintext segments of the plaintext video program; and

5   (b) combining the pseudo-random sequence generated for each segment seed value with

6   the plaintext segments of the plaintext video program to generate the encrypted

7   segments of the encrypted video program stored on the RAS device.

1   11.   The method for processing a video program as recited in claim 9, further comprising the

2   step of:

3   (a) initializing the pseudo-random sequence generator with segment seed values

4   corresponding to the encrypted segments of the encrypted video program; and

5   (b) combining the pseudo-random sequence generated for each segment seed value with

6   the encrypted segments of the encrypted video program to generate the plaintext

7   segments of the plaintext video program.

1   12.   The method for processing a video program as recited in claim 9, wherein:

2   (a) the pseudo-random sequence generator comprises a linear feedback shift register

3   (LFSR); and

4   (b) the LFSR is initialized with segment seed values corresponding to the plaintext

5   segments of the plaintext video program during encoding, and with segment seed

6   values corresponding to the encrypted segments of the encrypted video program

7   during decoding.

1   13.   The method for processing a video program as recited in claim 12, further comprising the

2   step of generating the segment seed values from an initial value.

1   14.   The method for processing a video program as recited in claim 8, wherein:

2   (a) the RAS device comprises a hard disk drive (HDD) comprising a disk;

3   (b) the disk comprises a plurality of data tracks;

4   (c) each track comprises a plurality of data sectors; and

5   each data sector stores an encrypted segment of the encrypted video program.